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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/978,041 | 10/17/2001 | Wolfgang Ruf | P21325 | 3688 |
| 7055 | 7590 | 10/01/2003 | EXAMINER | |
| GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191 | | | HUG, ERIC J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1731 | |

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) |
|------------------------------|------------------------|---------------------|
| | 09/978,041 | RUF ET AL. |
| | Examiner | Art Unit |
| | Eric Hug | 1731 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 11 July 2003 .

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-54 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 17-19 and 51 is/are allowed.

6) Claim(s) 1-16,20-42,46-50,53 and 54 is/are rejected.

7) Claim(s) 43-45 and 52-54 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 17 October 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). ____ .
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . 6) Other: ____ .

DETAILED ACTION

In view of the Appeal Brief filed on July 11, 2003, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Drawings

The drawings are objected to under 37 CFR 1.84(h)(5) because Figure 3a shows modified forms of construction in the same view. Figure 3a shows multiple embodiments of a headbox lamella end as described by paragraphs [0070] to [0073]. It is difficult to distinguish one embodiment from one another. Also, it is not clear what feature in the drawing that reference number 22 is pointing to. Applicant is requested to show each embodiment as a separate drawing and clearly point out the features described in the specification.

Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner

has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Specification

The amendment filed November 4, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The new matter is the provision that the high-performance polymer comprises at least one of a water absorption and a heat resistance greater than that of polysulphone. There is no support in the original specification for claiming a polymer having properties **superior** to those of polysulphone. Applicant is referred to original paragraph [0020] where it says: “Out of the group of high-performance polymers that perform the above-mentioned requirements during operation and during cleaning of the headbox in an excellent fashion, polyphenylene sulphone (PPSU), polyether sulphone (PES), polyetherimide (PEI), and polysulphone (PSU) are recommended.” In this paragraph, one infers that the four polymers are equally recommended and perform well within the scope of the invention. Applicant is also referred to original paragraphs [0035] and [0061] which similarly describes the four polymers. Nowhere in the original specification are the physical properties of these polymers compared.

Applicant has provided a chart of physical properties that shows that PPSU, PES, and PEI have superior water absorption and heat resistance properties to polysulphone. Applicant has stated that the amended material does not constitute new matter because this submitted chart of

properties are known and inherent features of high performance polymers. The examiner agrees that these properties are inherent, therefore the disclosure of these properties is not the basis of this new matter rejection. It is the express disclosure that PPSU, PES, and PEI are preferred over polysulphone based on physical properties deemed to be greater than those of polysulphone that constitutes the new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

The disclosure is also objected to because of the following informalities:

In paragraphs [0071] and [0072] reference number 22 is used to describe a “structure less end region”, an “end region”, a “structured end”, and a “structured free end region” (form paragraph).

Appropriate correction is required.

Claim Objections

Claims 43, 53, and 54 are objected to because of the following informalities:

In the preamble, “The lamella in accordance with claim 43”, should read “The headbox in accordance with claim 43”.

Claim 53 (independent claim) is a substantial duplicate of claim 14 (dependent claim).

Claim 54 (independent claim) is a substantial duplicate of claim 40 (dependent claim).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-16, 20-42, 46-50, 53, and 54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As indicated above, the specification contains new matter as well as the above claims. The new matter is the provision that the high-performance polymer comprises at least one of a water absorption and a heat resistance greater than that of polysulphone. There is no support in the original specification for claiming polymers having properties superior to those of polysulphone. In original paragraphs [0020], [0035], and [0061] the four polymers are all equally considered. Nowhere in the original specification are these polymers compared to each other in terms of their physical properties.

Applicant has supplied physical property data that shows inherently that PPSU, PES, and PEI have superior water absorption and heat resistance properties to polysulphone. Although this indeed supports the subject matter of the amended claims, the amended claims are not within the scope of the original subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16, 20-42, 46-50, 53, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodal et al (US 4,617,091) in view of Applicants' Admission of Prior Art and further in view of Lehtonen (US 5,553,381). Rodal discloses a headbox trailing element which may comprise any one of a number of thermosetting polymers including polysulphone (column 5, line 4; claims 12 and 14). Rodal does not specifically disclose that any of the suitable materials have superior water absorption and heat resistance to polysulphone, as determined by standard testing means.

Applicant has supplied physical property data that shows inherently that PPSU, PES, and PEI have superior water absorption and heat resistance properties to polysulphone. One skilled in the art would recognize that each polymer will have different water absorption and heat resistance properties.

One skilled in the art would recognize that the four polymers would perform differently, and therefore one would naturally expect each polymer to have different water absorption and heat resistance. Thus one skilled in the art could draw their own conclusion about which of the four polymers is superior in certain environments. For this reason, the four polymers are obvious variants of each other, and thus are considered to be interchangeable depending on the desired application and the environment to which the trailing element is exposed.

This obviousness is further exemplified by Lehtonen. Lehtonen discloses a coating for a roll in a paper machine which can comprise any one of a number of thermosetting polymers such as polysulphone, polyetherimide, or polyethersulphone. Lehtonen teaches that the coating provides chemical resistance, thermal resistance, and low water impregnation in a paper machine environment. Therefore, at the time of the invention, it would have been obvious to one skilled in the art to substitute polyetherimide or polyethersulphone for polysulphone in the trailing element of Rodal, as these compounds are known to have superior heat resistance and water absorption as disclosed by Applicant and are well known to be suitable in a paper machine environment. The claims are also unpatentable in view of *In re Leshin*, 125 USPQ 416 (CCPA 1960), where it was determined that the selection of a known material based on its suitability for the intended use is within the skill of a routineer in the art.

With respect to the dependent claims, claims 2-13 and 28-39 are inherent physical properties of the claimed polymers. Claims 14 and 40 are regarding the three high-performance polymers of which two are suggested by Lehtonen. Claims 15, 16, 41, and 42 are regarding the thickness of the free end of the trailing element which would be considered *prima facie* optimization in view of the disclosure of Rodal in column 4, lines 29-31, where it says the trailing element can be tapered, thin, or thick and in view of the disclosed thickness of 10-120 mils (0.25-3.0 mm) in column 5, line 52-54. Claims 20 and 46 is regarding a homogeneous structure, which Rodal discloses in column 5, lines 48-49 by stating that a single material may be used. Claims 21-25 are regarding the intended uses of the lamella, each which are clearly suggested by Rodal, as any appropriate jet speed as in claims 22, 23, 48, and 49, any type of

headbox as in claims 21, 24, 47, and 50, and any type of web producing machine as in claims 25 and 27, would have been obvious to one skilled in the art based on the teachings of Rodal.

Allowable Subject Matter

Claims 17-19 and 51 are allowed.

Claims 43-45 and 52 would be allowable if rewritten to overcome the objection to claim 43 given above.

These claims are allowable, primarily because of the combination of the high performance polymer and the claimed structured free end region having a dull lamella end (defined by the claimed height of more than 0.5 mm). As argued persuasively by Applicant, Rodal teaches a rigid laminated headbox trailing element constructed in a manner that teaches away from using a structured free end.

Response to Arguments

Applicant's arguments filed July 11, 2003, with respect to the rejection of claims 17-19, 43-45, 51, and 52 under 35 U.S.C. 103(a) as being unpatentable over Rodal in view of Applicant's Admitted Prior Art and Ewald, of claims 1-16, 20-42, 46-50, 53, and 54 under 35 U.S.C. 103(a) as being unpatentable over Rodal in view of Applicant's Admitted Prior Art and further in view of Horiki, and claims 15, 16, 41, and 42 under 35 U.S.C. 103(a) as being unpatentable over Rodal in view of Applicant's Admitted Prior Art, Horiki, and Ewald, have been fully considered and are persuasive. Therefore, these rejections have been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of Rodal, the admitted prior art, and Lehtonen as described above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.

Eric Hug
jeh

Steven P. Griffin
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